Kraken AWS Quick Start Guide

Kraken 3.10 on Amazon AWS

This quick start guide describes how to create and configure a virtual Kraken server on Amazon Web Service (AWS). For detailed configuration and operation information, please refer to the Kraken User's Guide.

For the default credentials, refer to the *Important Notice* (postcard shipped with appliances). You may download the *Important Notice* as well as the latest software and Release Notes through the Download Center on the Haivision Support Portal (look for Kraken VM Releases).



About Amazon AWS

Amazon AWS is a collection of remote computing services that make up a cloud computing platform for building, deploying and managing applications and services through a network of datacenters across several geographical regions. Amazon AWS allows you to deploy and manage your Kraken instances in this global network. For more information, please visit:

https://aws.amazon.com

Before You Start

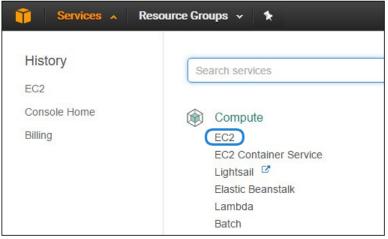
You must have an active Amazon AWS account to sign in to the AWS management portal. For evaluation purposes you can subscribe to AWS for a 12-month trial period. For more information, please visit: https://aws.amazon.com

With Amazon AWS, you must "bring your own license" (BYOL) for Kraken. Please contact your Haivision representative to discuss your licensing options. See Licensing Your Server for details.

Creating a Virtual Kraken Server

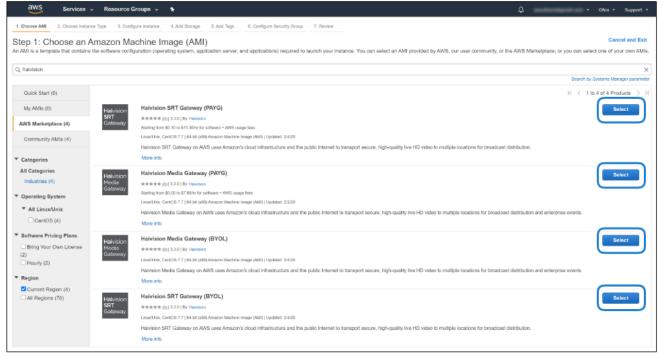
Signing in to AWS

- 1. Sign in to your AWS account: https://console.aws.amazon.com
- 2. After you have successfully logged in to the AWS portal, click Services > EC2.



Creating a Virtual Instance

- 1. On the EC2 Dashboard, click Launch Instance.
- 2. Click AWS Marketplace.
- 3. Type "Haivision" in the search box and press Enter to find the Kraken image.
- 4. Click the **Select** button corresponding to the version of the Amazon Machine Image (AMI) you wish to use, PAYG or BYOL.



- 5. Review the product and pricing details, and then click **Continue**.
- 6. Choose an Instance Type, and then click Next: Configure Instance Details:

Choose Al	41 2. Choose Instance Type	3. Configure Instance	4. Add Storage 5. Add	Tags 6. Configure Ser	curity Group 7. Review		
azon EC2 working c		nstance types optimized t	riate mix of resources f	or your applications. Les		They have varying combinations o nd how they can meet your compi	
	elected: m4.xlarge (13 ECUs, vendor recommends using a n						
	Family	- Туре -	vCPUs (j)	Memory (GiB) -	Instance Storage (GB) -	EBS-Optimized Available (j) -	Network Performance ()
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0	General purpose	12.micro Free tier eligible	1	1	EBS only		Low to Moderate
0	General purpose	t2.small	1	2	EBS only		Low to Moderate
	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate
	General purpose	t2.large	2	8	EBS only		Low to Moderate
0	General purpose	t2.xlarge	4	16	EBS only		Moderate
0	General purpose	t2.2xlarge	8	32	EBS only		Moderate
	General purpose	m4.large	2	8	EBS only	Yes	Moderate
	General purpose	m4.xlarge	4	16	EBS only	Yes	High
	General purpose	m4.2xlarge	8	32	EBS only	Yes	High
	General purpose	m4.4xlarge	16	64	EBS only	Yes	High
0	General purpose	m4.10xlarge	40	160	EBS only	Yes	10 Gigabit

🔒 Note

We do not recommend using tiers with low CPU resources, because the resulting performance of your server will be inadequate.

Important

For high bandwidth streams or critical viewing requirements, we recommend using computeoptimized (C5) instance tiers, as they are optimized for compute-intensive workloads and have high-performance network I/O. **c5.2xlarge** is generally recommended for Kraken AWS.

7. Modify your Instance Details as needed, and then click Next: Add Storage:

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Choose AMI Z. Choose Instance Type	3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review	
tep 3: Configure Instance infigure the instance to suit your require tance, and more.	ce Details ments. You can lounch multiple instances from the same AML request Spot instances to take advantage of the lower	pricing, assign an access management role to the
Number of instances	Launch into Auto Scaling Group ()	
Purchasing option	(i) 🗏 Request Spot instances	
Network	(i) vpc-f100bc96 (default) T C Create new VPC	
Submet	No preference (default subnet in any Availability Zoni Create new subnet	
Auto-assign Public IP	(j) Use submet setting (Enable)	
IAM role	None Teste new IAM role	
Shutdown behavior	(j) Stop •	
Enable termination protection	Protect against accidental termination	
Monitoring	Enable CloudWatch detailed monitoring Additional charges apply	
Tenancy	Shared - Run a shared handware instance Additional charges will apply for dedicated tenancy.	
Advanced Details		
	Cancel	Previous Review and Launch Next: Add Store

🔥 Note

You may wish to choose Enable under Auto-assign Public IP to give your server an IP address reachable from any location.

8. Set the amount of storage space you wish to make available to the server. For Kraken, set 75GB as minimal. Then click **Next: Add Tags**:

aws	Services 🔻	Q Se	earch for services, featur	es, marketplace products	, and docs	[Alt+S]	Σ	⇔ hmoe@h	aivision.com @ 4727	-0958-9631 🔻 N.	Virginia 🔻 Support 🔻
1. Choose AM	I 2. Choose Instanc	е Туре 3	3. Configure Instance 4	I. Add Storage 5. Add Ta	ags 6. Config	ure Security Group	7. Review				
Your instance	e root volume. You can			s. You can attach additiona s after launching an instan							
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Add New V	olume										
Free tier of restriction		n get up to 3	30 GB of EBS General F	Purpose (SSD) or Magneti	c storage. Learn	more about free usag	ge tier elig	jibility and usa	ge		
								Can	cel Previous	Review and Lau	nch Next: Add Tags

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1. Choose AMI 2. Choose In	instance Type 3.	Configure Instance 4. Add	Storage 5. Add Tags	6. Configure Security Group	7. Review				
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Root /c	dev/sda1	snap-08c847b3fc2b0765f	80	General Purpose SSD (gp2)	~	240/3000	N/A		Not Encrypte: 👻
Add New Volume			X *						
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions.									
						Canc	Previous	Review and Lau	Next: Add Tags

👍 Note

You may wish to choose Delete on Termination to have the storage space automatically removed if you cancel your subscription for the server instance.

9. Apply one or more tags (such as a Name) to the server, and then click **Next: Configure Security Group**:

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6. Configure Security Group 7. Review	
ne and value = Webserver. Learn more about tagging your Amazon EC2 resources.	
Value (255 characters maximum)	
Media Gateway Demo	8
Cancel Previous Review and Launch Next: Configure	Security Group
	6. Configure Security Group 7. Review ne and value = Webserver. Learn more about tagging your Amazon EC2 resources. Value (255 characters maximum) Media Gateway Demo

- 10. Create a new security group, or select from a list of existing groups. Make sure you have the following ports open:
 - Port 443 for HTTPS access to the web interface
 - Port 22 for SSH access to the Console UI interface
 - A custom port to allow incoming UDP traffic, such as SRT streams (use Custom UDP Rule). See SRT for more information.

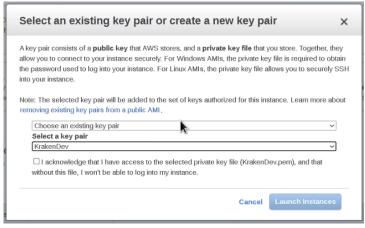
aws	Services 🔻	٩	Search for services, fea	tures, marketplace	products, and	docs [Alt+S]	Σ	🗘 hma	e@haivision.com @ 4727-0958	-9631 🔻	N. Virginia 🔻	Support 🔻
1. Choose AM	2. Choose I	nstance Type	3. Configure Instance	4. Add Storage	5. Add Tags	6. Configure Security Group	7. Review					
Step 6: 0	Configure	e Security	/ Group		default VPC	security group						
sg-469ddd	i21 (Gateway			launch-wizar	d-1 created 2015-09-03T12:2	3:12.901-07:	00				
sg-013d74	1606f4a5b88d I	aivision Media	a Gateway -BYOL3-0-1	-AutogenByAWSMI	P-This security	group was generated by AWS	Marketplace	e and is b	ased on recommended settir	igs for Hai	vision Media Ga	ateway (BYOL)
sg-0fb32d	6f09f3b21e8	laivision Media	a Gateway -BYOL3-1-1	-AutogenByAWSMI	P-This security	group was generated by AWS	Marketplace	and is b	ased on recommended settir	igs for Hai	vision Media Ga	ateway (BYOL)
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sg-438435	509 I	aivision Media	a Gateway -PAYG1-6-2	AutogenByAWSMI	P-This security	group was generated by AWS	Marketplace	and is b	ased on recommended settir	ngs for Hair	vision Media Ga	ateway (PAYG)
sg-0c86de	7b4719e4cb01	laivision SRT	Gateway -BYOL3-4-0-	AutogenByAWSMP	This security	group was generated by AWS	Marketplace	e and is ba	ased on recommended settir	igs for Hai	vision SRT Gat	eway (BYOL) ve
sg-0d641 e	e61de8d4b1f	Kraken			Kraken Secu	urity						
sg-07afa96	6c2fe50d8c2	NECF PoC			Security Sett	tings for NECF PoC						
sg-0bc17f	43b47c9bb81 p	acker 6008e9	9a-f24d-8ccb-f584-cbd	bf23710c3	Temporary g	roup for Packer						
sg-015b96	d813c383824	acker 6008ed	82-ccd5-ab8e-72c4-c0	7782309ec8	Temporary g	roup for Packer						
4								_				
Inbound rule	es for sg-0d64	1ee61de8d4b	olf (Selected security	groups: sg-0d6410	ee61de8d4b1	uf)						
Туре ()			Protocol (j)		Port Rang	ge (i)	Source	()	D	escriptior	i	
HTTP			TCP		80		0.0.0/0					
SSH			TCP		22		0.0.0/0)				
HTTP			TCP		443		0.0.0/0)				
T									Cancel	Previe	Review	w and Launch

11. Click Review and Launch.

12. Review your settings, and make any necessary corrections or changes. When you are satisfied, click **Launch**:

hoose AMI 2. Choose Inst	ance Type	3. Configure Insta	nce 4. Add Storage 5	Add Tags 6. Configure Security Group	7. Review	
p 7: Review Ins	tance L	aunch				
nstance Type		uunon				Edit instance ty
51						
Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	-	1	1	EBS only		Low to Moderate
Security Group ID			Name	•	Description	
sg-0d641ee61de8d4b1f			Kraken	<i>N</i>	Kraken Security	
All selected security gro	ıps inbound	d rules				
Туре 🕕		Protocol (j		Port Range (j)	Source ()	Description (i)
HTTP		TCP		80	0.0.0/0	
SSH		TCP		22	0.0.0/0	
HTTPS		TCP		443	0.0.0/0	
		UDP		7500 - 7600	0.0.0/0	
Custom UDP Rule						

13. When prompted, select or create a public/private RSA key pair that is used to authenticate SSH sessions, and then click **Launch Instances**:



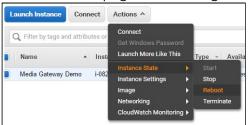
🔒 Note

SSH access to the Console UI is only allowed via SSH public key.

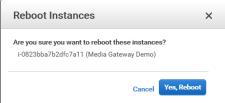
14. In a few moments, a Launch Status page appears, informing you that your instance is in the process of launching. Creating your server instance can take up to several minutes. At any time, click **View Instances** to see more details:

aws	Services 🔻	Q Search for services, features, marketplace products, and docs	[Alt+S]	24	hmoe@haivision.com @	⊉ 4727-0958-9631 ▼	N. Virginia 🔻	Support 🔻	
Launo	ch Status								
								*	
۲	Your instances are The following instance lau	now launching ches have been initiated: <u>101772a367edb6d941</u> View launch log							
0	Get notified of estimated charges Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).								
How to	connect to your insta	nces							
	ances are launching, and it m erminate your instances.	ay take a few minutes until they are in the $\mathbf{running}$ state, when they will be	e ready for you to use. Usag	e hours (on your new instances w	ill start immediately a	nd continue to ac	crue until you	
Click Vie	w Instances to monitor your	instances' status. Once your instances are in the running state, you ca	n connect to them from the I	Instances	s screen. Find out how t	o connect to your ins	tances.		
▼ Her	e are some helpful re	sources to get you started							
 How t 	o connect to your Linux insta	• Amazon EC2: User Guide							
• Learn	about AWS Free Usage Tie	Amazon EC2: Discussion Forum							
While yo	our instances are launchin	g you can also							
		otified when these instances fail status checks. (Additional charges may	r apply)						
	e and attach additional EBS	volumes (Additional charges may apply)							

15. After the Instance State changes to "running", reboot the virtual server by selecting it in the AWS View Instances page and clicking **Actions > Instance State > Reboot**.



16. Confirm rebooting in the confirmation dialog box.



17. Return to the AWS View Instances page. In the row corresponding to your server, take note of the Public IP address and Instance ID assigned by AWS to your instance. The Instance ID is the default password for signing into Web Interface.

aws Services V	Q Search for services, features, marketplace products, and	docs [Alt+S] D & hmoe@haiv	ision.com@4727-0958-9631 ▼ N. Virginia ▼ Support ▼
Instances New	EC2 > Instances > i-01772a307edb6d941		Í
Instance Types			
Launch Templates	Instance summary for i-01772a307edbe	6d941 Info	C Connect Instance state V
Spot Requests	Ujdated less than a minute ago		
Savings Plans	Instance ID	Public IPv4 address	Private IPv4 addresses
Reserved Instances New	i-01772a307edb6d941	3.236.194.105 open address 2	172.31.68.14
Dedicated Hosts			LP 1725136.14
Scheduled Instances	Instance state	Public IPv4 DNS	Private IPv4 DNS
Capacity Reservations	Pending	ec2-3-236-194-105.compute-1.amazonaws.com	ip-172-31-68-14.ec2.internal
▼ Images		open address 🔀	
AMIs	Instance type	Elastic IP addresses	VPC ID
	t2.micro	-	🗇 vpc-5e70853a 🔼
Elastic Block Store			
Volumes	AWS Compute Optimizer finding	IAM Role	Subnet ID
Snapshots	am:aws:iam::472709589631:user/hmoe@haivision.co	-	🗗 subnet-d2385ab7 🔀
Lifecycle Manager	m is not authorized to perform: compute-		
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At this point, your virtual server is up and running!

- If you have created a BYOL instance, before continuing you need to license your server. See Licensing Your Server.
- If you have created a PAYG instance, you are ready to sign in and begin using your server. See Signing in to Your Server.

Signing in to Your Server

Accessing the Web Interface

🔒 Note

Internet Explorer is no longer supported. We recommend using Microsoft Edge or Google Chrome.

- 1. Open a Web browser, and enter the public IP Address of the virtual server. See Step #17 in Creating a Virtual Server to find the assigned IP address. A message may appear warning that the connection to the server is untrusted. This is normal, and you can safely continue.
- 2. Sign in to the Web Interface, using the haiadmin username and password (the default password is provided on the *Important Notice*, available from the Haivision Support Portal).

Krak		
Usernam		
Password		
	Sign In	

- 1. Click the **Sign In** button.
 - For BYOL instances, a License Required modal appears. See Licensing Your Server to obtain a license.

For more details, refer to Signing into the Web Interface in the User's Guide.

Accessing the Console UI

You can log in to virtual server's Console UI via a Secure Shell (SSH) client (e.g., Terminal on macOS, or PuTTY on Windows).

🔒 Note

You must have a private RSA key corresponding to the public key with which the virtual server was configured. See Step #13 in Creating a Virtual Server.

1. In a terminal window, enter the following command:

ssh -i ~/.ssh/<private-key_rsa> hvroot@<public-ip-address>

The Console UI appears. Note that the Root user is disabled; however, Root commands can be run with sudo .

- 2. In the navigation sidebar, use the ↑↓ (up and down arrow) keys to highlight menu items, and then press the **Enter** key.
- 3. Change settings as necessary.

🔥 Important

Network configuration settings are controlled by Amazon AWS. Do not change them using the Haivision Console UI.

- 4. Press the **Enter** key to save your changes and return to the main screen.
- 5. Select Log Out and then press the Enter key to exit the Console UI.

For more details, refer to Using the Console UI with Haivision Hardware.

Licensing Your Server

Before beginning to transcode or encode video, you must obtain a license from Haivision.

🔥 Note

Without a valid license key, you can sign in, but you cannot encode or transcode video.

Kraken AWS uses the EC2 **Instance ID** instead of the MAC address for licensing. The Kraken license service on Kraken VMs periodically retrieves the VM information (including the instance ID) from the instance metadata service Retrieve instance metadata - Amazon Elastic Compute Cloud for license validation.

You can find the Kraken AWS **Instance ID** on the AWS instance detail view of the Kraken VM. You will need to copy this Instance ID to submit a license request (see below).

Q. Filter by tags and attributes or se	rch by keyword				
Name - Instance ID	▲ Instance Type Availability Zone	Instance State -	Status Checks 🗵	Alarm St	atu
i-01772a307	edb6d941 t2.micro us-east-1b	stopped		None	
i-06d58ea1b	2ed28b62 c4.xlarge us-east-1e	running	2/2 checks	None	
i-095cf6f1bt	0505f8c t2.xlarge us-east-1d	running	2/2 checks	None	
KK36PublicH i-0d812adde	-	running	2/2 checks	None	
4					
Description Status Checks	Monitoring Tags Usage Instructions				
Instance ID	i-0d812adde019002d8				
Instance state	running				
Instance type	t2.xlarge				
Finding	You may not have permission to access AWS Compute (Optimizer.			
Private DNS	ip-172-31-13-95.ec2.internal				
Private IPs	172.31.13.95				
Secondary private IPs					
VPC ID	vpc-5e70853a				
Platform	Other Linux				
Platform details	Linux/UNIX				
Usage operation	Runinstances				
Source/dest. check	True				
T2/T3 Unlimited	Disabled				
EBS-optimized	False				
	ebs				
	ebs				
Root device type Root device	ldevisda1				
Root device type					
Root device type Root device	/dev/sda1				
Root device type Root device Block devices	/dev/sda1 /dev/sda1				
Root device type Root device Block devices Elastic Graphics ID	/dev/sda1 /dev/sda1 -				
Root device type Root device Block devices Elastic Graphics ID Elastic Inference accelerator ID	/dev/sda1 /dev/sda1 -				

To obtain a license for the Kraken AWS server:

- 1. Sign in to the Web interface using the credentials provided in the Important Notice, available from the Haivision Support Portal.
- 2. Click the **Administration** icon on the toolbar (the settings gear) and click **Licensing** from the sidebar.

Make sure you have the AWS Instance ID and the Kraken version number.

- 3. To request a license for your product:
 - a. Log in to the Haivision Support Portal (https://support.haivision.com).

- b. After logging in, click License Requests.
- c. Click the **New** button.
- d. Select the appropriate device type and click the **Next** button.
- e. Fill in the form with the appropriate information, and click Save.

Your license request is submitted and you will be contacted by a Haivision representative shortly with a license key for your product.

- 4. After you receive a license key, paste the license string in the License text box.
- 5. Click **Save Settings** to apply the license. The License Features list is updated to show the new license information.

Kraken			Welcome haladmin (Sign out)	0 🔅 🛛
Licensing				Save Settings
Accounts	Haivision Kraken			
Branding	License expires on 9/19/20	21, 7:00 PM		出
Certificates	Product	Kraken 3.6.0		
Events	MAC Address	0A/6A/4E:40/F1/F1		
Licensing	Cloud License	EC2_BYOL		
Network	Instance ID	i-0d812adde019002d8		
Policies				
Presets	License Features			
Services				
Status	Upgrade Version Limit	3.6		
	Hardware Accelerated (QSV) H.264 encoder	Enabled		
	Hardware Accelerated (QSV) HEVC encoder	Enabled		
	MPEG-2 video encoder	Enabled		
	HEVC video encoder	Enabled		
	ST2110 Input			
	GigE Vision Input			
	NDI Input			
	KLV option	Enabled		
	Streams allowed			
	Active stream load	0%		

Your virtual server is now licensed and available. For more information on licensing, please refer to Licensing Your Kraken in the User's Guide .

SRT Access

Your virtual server can be used to receive and redistribute SRT streams. You must first verify that the Security Group is set to your network configuration, and you must open a UDP port for your network if you want to use SRT Listener mode. This was completed in Step #10 in Creating a Virtual Server when setting up your AWS resource.

🔥 Note

For more information on SRT, please refer to the Kraken User's Guide and the SRT Deployment Guide.

Stopping the Instance

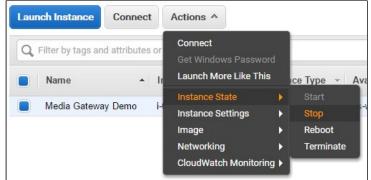
You can stop and deallocate your server instance, while keeping all configurations active. After the instance is stopped, no further running charges are applied.

🔥 Important

Please be aware that simply *shutting down* your server via the Console UI does not deallocate your instance, and you will continue to be charged for the running instance. To avoid unwanted charges, you must stop the AWS virtual machine.

To stop your server instance:

- 1. Navigate to the AWS View Instances page.
- 2. Find and select your server, then click Actions > Instance State > Stop.



🔥 Important

It is possible that shutting down an AMI instance results in a change in the MAC address the next time it is started, which causes the existing BYOL license to expire. If this happens, contact Haivision with the new MAC address to obtain a replacement license.

Obtaining Documentation

This document was generated from the Haivision InfoCenter. To ensure you are reading the most up-todate version of this content, access the documentation online at https://doc.haivision.com. You may generate a PDF at any time of the current content. See the footer of the page for the date it was generated.

Getting Help

General Support	North America (Toll-Free) 1 (877) 224-5445
	International 1 (514) 334-5445
	and choose from the following: Sales - 1, Cloud Services - 3, Support - 4
Managed Services	U.S. and International 1 (512) 220-3463
Fax	1 (514) 334-0088
Support Portal	https://support.haivision.com
Product Information	info@haivision.com